

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) ~~An oxide-based mixture for forming a~~ A ceramic matrix composite comprising:

a ceramic fiber;

a sol gel comprising from about 10 wt% to about ~~25~~ 60 wt% of ~~metal oxide~~ solids; and

alumina particles;

wherein the sol gel is mixed with said alumina particles to form a mixture including from about 40 wt% to about 70 wt% said sol gel and about 30 wt% to about 60 wt% of said mixture includes said alumina particles;

wherein the mixture of the sol gel and the aluminum particles surround the ceramic fiber.

2. (Currently Amended) The ~~mixture~~ ceramic composite of Claim 1 wherein the sol gel is selected from the group consisting of alumina sol, alumina-coated silica sol ~~and , silica sol, and any appropriate combination thereof.~~

3. (Currently Amended) The ~~mixture~~ ceramic composite of Claim 2 wherein the ~~ceramic solid~~ comprises from about 0 wt% to about ~~33~~ 60 wt% of the silica sol.

4. (Currently Amended) The ~~mixture~~ ceramic composite of Claim 3 wherein the ~~ceramic~~ solid comprises from about 5 wt% to about ~~10~~ 40 wt% of the silica sol.

5. (Currently Amended) The ~~mixture~~ ceramic composite of Claim 1 wherein the alumina particles have a size of ~~from~~ between about 0.1 μm to about 1.5 μm .

6. (Currently Amended) The ~~mixture~~ ceramic composite of Claim 1 wherein said mixture further comprises a filler material.

7. (Currently Amended) The ~~mixture~~ ceramic composite of Claim 6 wherein the filler material is a mullite.

8. - 22. (Cancelled)

23. (Currently Amended) The ~~mixture~~ ceramic composite of Claim 1, wherein said sol gel includes a ~~metal-oxide~~ solids content of about 20 weight percent.

24. (Cancelled)

25. (New) The ceramic composite of Claim 2, wherein the solids of the alumina sol consists of about 10 wt% to about 25wt%.

26. (New) The ceramic composite of Claim 1, wherein said ceramic fiber is woven into a fabric.

27. (New) The ceramic composite of Claim 1, wherein said ceramic fiber is continuous.

28. (New) The ceramic composite of Claim 26, wherein the fabric is formed of cut ceramic fibers.

29. (New) A ceramic composite comprising:
a plurality of ceramic fibers;
an alumina sol having a solids content of about 10 wt% to about 25 wt%
consisting of alumina oxide; and
alumina particles;
wherein the sol is mixed with said alumina particles to form a mixture
consisting of about 40 wt% to about 70 wt% of said sol and about 30 wt% to about 60
wt% of said alumina particles;
wherein the mixture is infiltrated into said plurality of ceramic fibers to form
the ceramic composite.

30. (New) The ceramic composite of claim 29, wherein said plurality of
ceramic fibers are sintered before the mixture is infiltrated into the ceramic fiber.

31. (New) The ceramic composite of claims 29, wherein said plurality of
ceramic fibers are continuous.

32. (New) The ceramic composite of claim 29, wherein said plurality of
ceramic fibers are cut.